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Monthly Statistical Report

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AUGUST 1988

SUMMARY

With the largest year-to-year increase since the first quarter, total deliveries, at least on the surface, showed somewhat more strength in August than had been evident during the past several months. The 2.2 percent, 362 thousand B/D increase over last August, however, sprang partly from deliveries a year ago which were 200-250 thousand B/D below trend. Had the year-ago level been more in line, this August's increase would have come out to roughly 1 percent.

Though not all of the slowdown in deliveries' growth in the past several months necessarily represents weakening consumption, developments for several fuels suggest that the slowdown consists of more than a fluctuation around the previous trend. Slower growth in air traffic has shown up in reduced growth for kerosine jet fuel, while evidence of moderating demand for residual fuel oil and "other oils" has also appeared in recent months. Overall consumption growth is estimated to be running at around 2 percent.

Domestic crude oil production, which has shown steady declines for the past two and a half years, fell again in August to a level about 70 thousand B/D lower than one year earlier; production in the lower 48 fell almost 175 thousand B/D, while Alaskan production continued to hover around 2 million B/D as it has since late last year. Imports continued at over 7 million B/D, not far short of last August's high levels. Though most of this year's roughly 550 thousand B/D increase in imports so far has consisted of crude oil, the summer's imports of gasoline and components have been the highest ever, exceeding half a million B/D.

Refinery production of gasoline has also been climbing in recent months; in August it reached the highest level in nearly ten years. With refinery utilization rates topping recent-year records, product stocks rose while crude oil inventories fell; overall, however, total stocks remained nearly the same.

PRODUCT SUPPLIED[1/]

Gasoline

AUGUST REVERSES JULY'S DECLINE. Reversing July's decline, gasoline deliveries in August rose 1.3 percent over a year ago—but the increase still fell short of gains earlier in the year.

However, the latest data show that travel is maintaining its growth of about 3.6 percent over a year ago, similar to that of last year when gasoline deliveries were rising at a 2.4 percent rate. With reports of distributors' efforts to keep inventories low in order to minimize the risks of recent increased price uncertainty, it can be inferred that at least some of gasoline's slower deliveries of the past few months have been due to non-primary stock drawdowns.

Even if this is the case, deliveries growth for the past eight months has averaged about 1.5 percent—and nonprimary stock movements would normally tend to wash out over such longer periods—indicating consumption growth close to that rate as well. Thus, the implied increase in fuel efficiency of about 2 percent this year would be double that of recent years. Although such a rate is possible, it seems high in light of the flattening out of new-car efficiency improvements since 1986. The apparent discrepancy between deliveries data and consumption indicators may indicate that the initial underestimation of gasoline imports—and thus deliveries—that has occurred in the past few years is recurring; such underestimation is more likely in periods of unusually strong imports such as have taken place this summer.

The rate of improvement in the new car fleet's average fuel efficiency has closely paralleled gasoline prices over the last decade and a half, influenced by the effect of gasoline price levels on the demand for smaller and more fuel-efficient cars. From 1974 to 1981, inflation-adjusted gasoline prices were significantly higher than in the years immediately preceding—at one point in early 1981 reaching levels nearly double those existing prior to the Arab oil embargo of 1973. Over this period, the rated efficiency of the new car fleet rose an average of 1.7 miles per gallon per year.

From 1981 until 1986, gasoline prices drifted downwards—and the annual average improvement in new-car efficiency slowed to 0.5 miles per gallon per year. In the post-1986-price-crash era, gasoline prices have now fallen to levels that, once adjusted for inflation, are roughly equal to those just prior to 1973—and the weighted average fuel efficiency rating of new cars has held steady at a little over 28 miles per gallon. Even so,

API ESTIMATES

	AUGUST		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	16.7	2.2	16.9	2.1
Crude oil production[2/]	8.1	(0.8)	8.2	(2.1)
Total imports[3/]	7.0	(4.6)	7.0	8.7
Stocks (million bbl)[3/]	1,077	1.6	na	na

turnover of the fleet continues to raise the average economy of existing vehicles, but at a slower rate, estimated to be about 1 percent per year for the last couple of years.

Distillates

HIGHWAY USE CONTINUES AS LEAD GROWTH FACTOR. Unusually low deliveries a year ago helped to boost this August's year-to-year comparison for distillates to a nearly 12 percent increase. Had not last August's deliveries been roughly 200 thousand B/D below trend, this August's deliveries would still have risen by 3 to 4 percent.

This is similar to the estimated underlying growth in distillate consumption, which continues to be propelled in large part by transportation demand. Though truck traffic growth is estimated to be continuing at a 5 to 6 percent rate, rail traffic has recently been rising at less than half of the 8 percent witnessed in the first half of this year. Since, in terms of relative market share, only about a fifth as much fuel is consumed on the rails as on the highways, reduced growth for rail traffic has not resulted in a major slowing for the land transportation segment of distillate demand.

Other sectors individually have not had nearly as large an impact on deliveries as on-highway usage. Nevertheless, the strength of the economy has likely pushed up usage in most of these other sectors, though the drought has likely cut consumption in the farm sector. Though for sectors taken singly, these effects have been small in proportion to overall distillate demand, we estimate that together their net contribution amounts to as much as a quarter of the current estimated increase in consumption.

Residual Fuel Oil

HOT WEATHER SPURS UTILITY USE BUT TOTAL IS DOWN. Deliveries of residual fuel oil in August are estimated to be 1,146 thousand B/D, representing a decline of 2.6 percent from last year but a slight increase of 0.7 percent from July. The current estimate therefore represents a continuing pattern of stable deliveries seen during the last several months at levels substantially lower than those recorded earlier in the year.

Despite continuing high utilization of industrial capacity, industrial demand for heavy fuel oil continues to be weak. Part of the softness is due to the seasonal increase in interruptible gas supplies, which are competitive with heavy fuel oil. But some of the recent increase in gas supplies is also believed to be the result of the willingness of suppliers to provide more gas after a period of limited deliveries due to unattractive wellhead prices. This has apparently displaced additional quantities of fuel oil delivered to this sector.

As in the previous month, electric utilities' demand for residual fuel was believed to be the main positive influence on deliveries of the fuel as whole. But much of the demand took place in the first half of the month as a result of continued abnormally high temperatures. Deliveries, however, were reported to have slowed considerably during the second half of the month as a result of the change in the weather. Cooling-degree days were about 20 percent higher than normal for the month. Nonetheless, increased supplies of interruptible gas were believed to have sharply limited the increases in fuel oil deliveries to utilities.

Deliveries of bunker fuel are believed to be weak in most parts of the country. East Coast markets are reported to be slow as a result of the availability of more competitive sources in Rotterdam. Gulf Coast activity is reported to have been unusually slow for much of the month due to lack of shipping activity. In addition, domestic deliveries of bunker fuel on the West Coast are believed to have been displaced by large export cargoes to other parts of the Pacific Rim.

Kerosine Jet Fuel

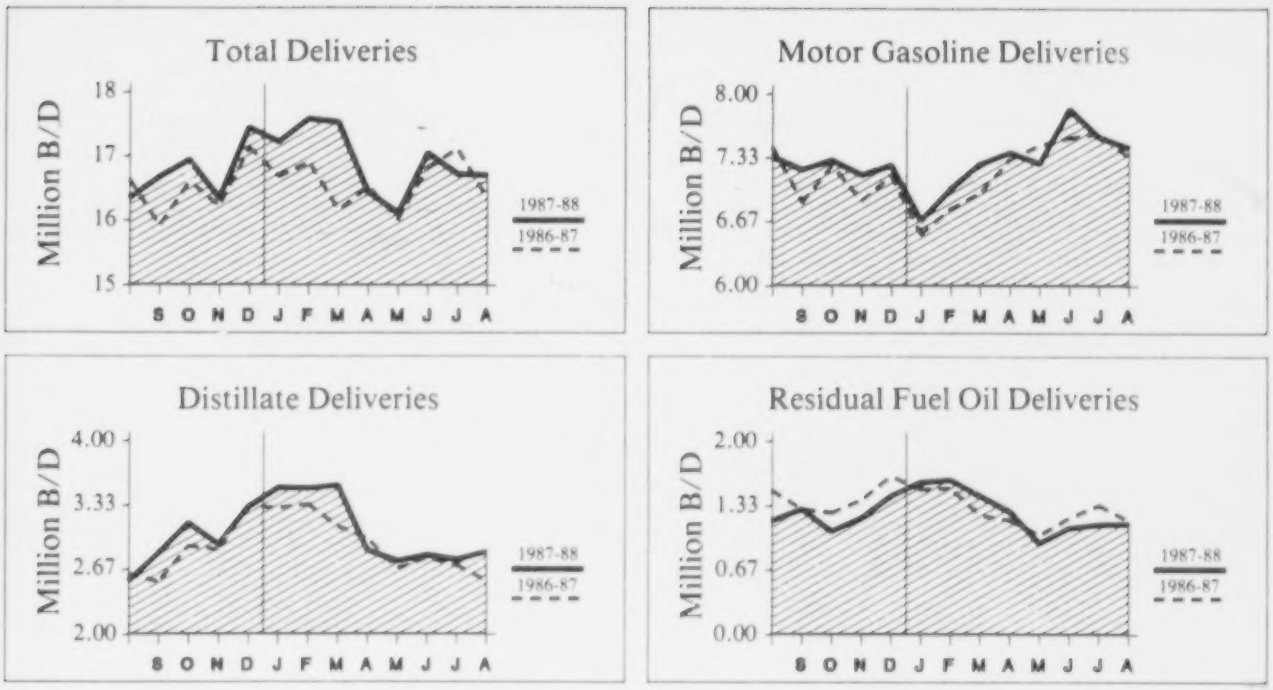
DELIVERIES' GROWTH SLOWING WITH AIR TRAFFIC. Kerosine jet fuel deliveries' growth continued its slower pace in August, rising only 0.8 percent over the same month a year ago. For a fuel that has been the fastest-growing major product in all but one of the past five years (residual fuel oil's percentage increase exceeded that of kerosine jet fuel in 1986), this year's slowing in deliveries is a significant shift. Roughly paralleling air traffic, deliveries' growth rate slipped from 7 percent in the first quarter to 4 percent in the second; so far in the third quarter, it has averaged less than 1 percent, though air traffic is estimated to be growing at a slightly higher rate.

Other Oils

DOWN 1.6 PERCENT FOR AUGUST. Deliveries of other oils in August are estimated to be 4,027 thousand B/D, representing a decline of 0.9 percent from last month and 1.6 percent from August, 1987. The slight decrease from last year's levels apparently represents continued moderation of strength in the category that began to take place earlier in the year.

Deliveries of petrochemical feedstocks, which were reported to be similar to those of the last several months, are believed to be responsible for much of the moderation in other oils' deliveries. Purity ethane deliveries, however, are reportedly robust as a result of their high ethylene product value and lack of lower-priced co-products. Ethane continues to be the most desired feedstock in an environment of high capacity utilization for petrochemical plants. Propane deliveries are also reported to be strong, but ethane continues to dominate the light end of the olefin markets. Normal and iso-butane deliveries, however, are reported to have declined slightly as a result of higher demand for other feedstocks. At the heavier end, naphtha and gasoil apparently continue to maintain their market share by being the most economical feedstocks.

Asphalt and road oil deliveries were reported to be strong in August, the peak month of activity for this product. In addition to the seasonal upswing, the rise in activity represents an apparent reversal of weakness seen during the summer. After delays implementing budgets for the new fiscal year in several states, road building and maintenance activity was reported to have made substantial gains, but the increases were not uniform. West Coast deliveries were believed to be somewhat higher than those of last year, but East Coast activity was believed to have trailed last year's pace slightly.



SUPPLY[1/]

Production

ALASKA STEADY, LOWER 48 OUTPUT STILL FALLING. With August's year-to-year decline of about 70 thousand B/D, domestic crude oil production's fall has continued steadily now for two and half years. Alaskan production, though up roughly 100 thousand B/D year to year, has remained near 2 million B/D since late last year. Lower 48 production has continued to fade, with August's output down about 175 thousand B/D from a year ago and more than 1.1 million B/D from early 1986.

The partial recovery that began last year in well servicing, needed to maintain existing wells' production, now appears to be eroding. Last year's recovery, though significant, restored only about half of the nearly-50 percent drop well servicing had experienced following the 1986 oil price crash. Well servicing has continued somewhere near these higher levels for much of this year, but recent months' data have been slipping; the lower crude oil prices and increased price uncertainty of the past several months have no doubt reduced the amount of well servicing that is economic to undertake.

Imports

UP OVER ONE HALF MILLION B/D FOR EIGHT MONTHS. Though slipping from July's strong 7.3 million B/D, imports continued at over 7 million B/D in August. Because of frequent short-term swings in imports, one-month comparisons are often less informative than longer-term developments. Specifically, the past two months' imports have shown declines of 3 to 5 percent when compared with exceptionally strong imports in those same months last year, of which nearly 40 million barrels went to inventories rather than consumption. But for the first eight months as a whole, imports are ahead by more than half a million B/D, the logical consequence of the continued decline in domestic production and increase in consumption.

Overall, this year's increase in imports has been almost entirely in the form of crude oil rather than products. However, the growth in imports of gasoline and components during this year's peak driving season—for the first time averaging more than half a million B/D for June through August—continues the string of steady increases in these imports that have been taking place almost every summer since 1980. For August, imports of gasoline and components, though retreating from July's record level, still averaged more than 550 thousand B/D. Distillate imports were down slightly from a year ago, while residual fuel oil imports continued to lag behind last year's in response to weaker demand.

Refinery Operations

GASOLINE OUTPUT RISES ABOVE RECENT-YEAR RECORD. Refineries, already operating at rates high by recent historical standards in July, stretched further in August to reach the highest monthly utilization rate in almost ten years—88.0 percent.

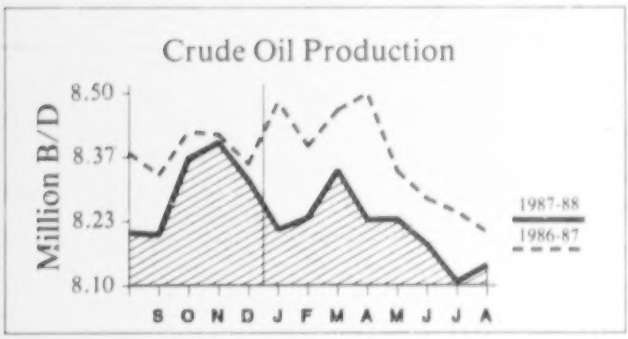
Gasoline production also pushed past recent-year records to nearly 7.2 million B/D, the highest monthly output in nearly ten years. While distillate production also rose, weak deliveries for kerosine jet fuel and residual fuel oil were reflected in year-to-year declines in output for those products.

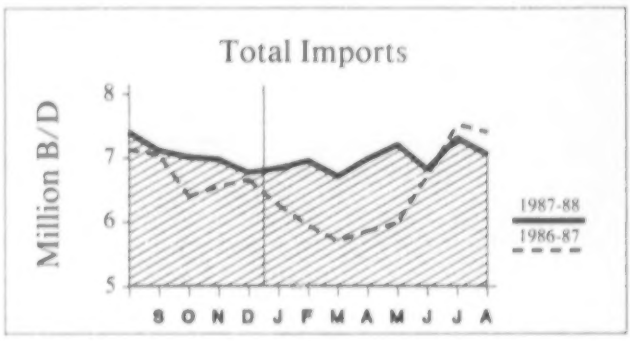
Inventories

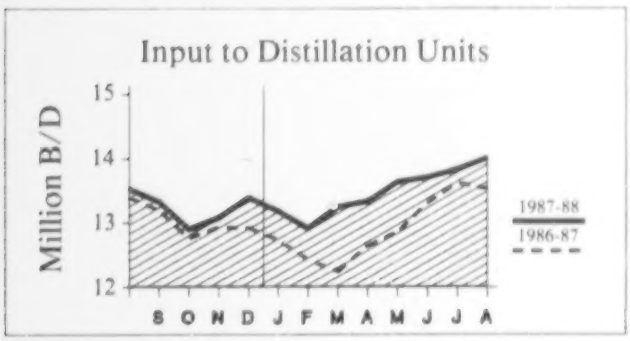
CRUDE STOCKS FALL FOR SECOND MONTH. Total stocks were nearly unchanged in August, but high refinery runs transformed crude oil barrels into product inventories; crude stocks fell 18 million barrels, with product stocks rising by a slightly greater amount.

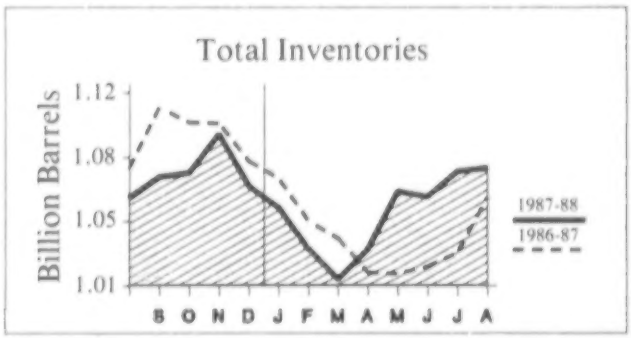
Crude oil inventories, which had risen to nearly 360 million barrels at the end of June—one of the highest levels in five years—slipped for the second month in a row in August. Over that two-month period they have fallen about 30 million barrels as uncertainty over the direction of OPEC production and its effect on world petroleum markets has increased the risk of holding inventories.

In a departure from the typical August pattern, refinery emphasis on gasoline production, combined with stronger deliveries for distillates, gave a bigger boost to gasoline than to distillate inventories. This reversal, however, compensated in part for the relative stock levels of the two products. Gasoline inventories, which have been lower than in recent years, rose close to 6 million barrels, while distillate stocks, rising 4 million barrels, nearly equaled those of a year ago.









1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 552 million barrels as of August 31, 1988).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	AUGUST			YEAR-TO-DATE		
	1988[1]	1987[2]	% Change	1988[3R]	1987[2]	% Change
Products Supplied:						
Total motor gasoline	7,434	7,338	1.3	7,302	7,194	1.5
Finished leaded motor gasoline*	1,311	1,682	(22.1)	1,401	1,800	(22.2)
Finished unleaded motor gasoline*	6,123	5,656	8.3	5,901	5,394	9.4
Naphtha-jet	219	218	0.5	211	204	3.4
Kerosine-jet	1,209	1,199	0.8	1,216	1,167	4.2
Distillate fuel oil	2,851	2,553	11.7	3,077	2,933	4.9
Residual fuel oil	1,146	1,176	(2.6)	1,278	1,271	0.6
All other oils[4]	4,027	4,094	(1.6)	4,016	4,014	-
Reclassified[5]	- 177	- 231	(23.4)	- 180	- 213	(15.5)
Total domestic products supplied	16,709	16,347	2.2	16,920	16,570	2.1
Exports	878	664	32.2	832	741	12.3
Total products supplied	17,587	17,011	3.4	17,752	17,311	2.5
Supply:						
Domestic production:						
Crude oil[6]	8,141	8,210	(0.8)	8,183	8,363	(2.1)
Natural gas liquids	1,601	1,571	1.9	1,606	1,588	1.1
Other supply[7]	856	857	(0.1)	1,019	849	20.0
Total domestic supply	10,598	10,638	(0.4)	10,813	10,800	0.1
Imports:						
Crude oil, total	5,179[10/]	5,447[10/]	(4.9)	4,952[10/]	4,449[10/]	11.3
Canadian	655	613	6.9	684	611	11.9
Other	4,524	4,834	(6.4)	4,268	3,838	11.2
Products, total	1,869	1,944	(3.9)	2,029	1,976	2.7
Residual fuel oil	492	512	(3.9)	540	577	(6.4)
Other	1,377	1,432	(3.8)	1,489	1,399	6.4
Total imports	7,048	7,391	(4.6)	6,981	6,425	8.7
Total supply	17,646	18,029	(2.1)	17,794	17,225	3.3
Stock change, all oils	+ 59	+1,018	XXXX	+ 42	- 86	XXXX
Refinery Operations						
Input to crude oil distillation units	14,004	13,527	3.5	13,481	12,919	4.4
Operable capacity	15,917	15,598	2.0	15,899	15,587	2.0
Refinery utilization (%)[8]	88.0%	86.7%	1.5	84.8%	82.9%	2.3
Crude oil runs	13,853	13,380	3.5	13,312	12,770	4.2

Stocks (millions bbls.)	1988		1987[2]	% Change from . . .	
	Aug. 31[9]	July 31[9]	Aug. 31	Previous Month	Year Ago
Crude oil [10/]	329.8	348.1r/	332.5	(5.3)	(0.8)
Unfinished oils	111.6	113.4r/	103.6	(1.6)	7.7
Total motor gasoline**	216.6	211.1r/	226.5	2.6	(4.4)
Finished leaded motor gasoline*	43.0	43.0	53.8	-	(20.1)
Finished unleaded motor gasoline*	136.7	131.8r/	134.2	3.7	1.9
Naphtha-jet	7.0	7.2	7.0	(2.8)	-
Kerosine-jet	40.3	39.6	40.8	1.8	(1.2)
Distillate fuel oil	123.3	118.9r/	124.7	3.7	(1.1)
Residual fuel oil	38.8	40.2r/	45.7	(3.5)	(15.1)
All other oils	209.5	196.6r/	179.2	6.6	16.9
Total all oils	1,076.9	1,075.1r/	1,060.0	0.2	1.6

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-June, U.S. Department of Energy, July-August, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarb[illegible]cessing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Ope[illegible]"
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (S[illegible] oil s[illegible]in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending [illegible]